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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/452,367

11/30/1999

DANIEL G. SCHWEIKERT

P-3790

1232

7590

05/21/2004

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EXAMINER

MITCHELL, JAMES M

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/452,367

Applicant(s)

SCHWEIKERT ET AL.

Examiner

James M. Mitchell

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12, 14-19 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-12, 14-17 and 35-37 is/are rejected.
- 7) ☐ Claim(s) 8, 9, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

New corrected drawings are required in this application because pursuant to 37 C.F.R. §1.84, each sheet (i.e. Fig 5) must include a top margin of at least 2.5 cm. (1 inch), a left side margin of at least 2.5 cm. (1 inch), a right side margin of at least 1.5 cm. (5/8 inch). Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 6, 16 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For claim 2, it is unclear how the shield line can be both separated from a first signal and be a part of a single conductor layer with the first shield line; they are mutually exclusive. For claims 2 and 16, it is unclear how the first shield and second shield line are a part of a single conductor layer; having a first and second shield line is mutually exclusive of them being part of a single conductor layer.

To apply art, examiner assumes they are all within one layer of the device and not a single conductor layer.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 6, 16 and 35-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Okumura (JP405343546).

Okumura (Fig 1a,b) discloses: (claim 1, 35, 36) a first signal line (Lft.11); a second signal line (Rt. 11); and a first shield line (12) positioned between but separated from said first signal line and said second signal line in an unused substrate area (via free of metallization), said first shield line being unconnected to a ground voltage source ("dummy"); (claim 4) wherein said first shield line has an area sufficient to prevent said first shield line from inherently causing capacitive coupling between said first signal line and said second signal line to be greater than if said first shield line was not present (Abstract; via reduction in capacitive coupling in dummy by long lines as indicated in applicant's spec. P. 13); and the first and second shield line are all apart of a single conductor layer (Fig 1b; a plane in layer 3 defined by the height of conductive material, 11, 12 etc.)

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 3, 5-7, 10-13, 15-17 and 35-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Koike (U.S. 6,649,997).

(Koike (Fig 8) discloses: (claim 1, 35, 36) a first signal line (not labeled connected Lft. metallization connected to source/drain); a second signal line (not labeled connected Rt. metallization connected to source/drain); and a first shield line (23a) positioned between but separated from said first signal line and said second signal line in an unused substrate area (free of metallization), said first shield line being unconnected to a ground voltage source ("dummy"); wherein said first signal line, said second signal line, and said first shield line are each in a different conductor layer (the conductors separated by spaces); (claims 5, 7, 15) and a second shield line (25a) electrically connected (understood to mean two electrically conductive materials touching) to said first shield line; wherein said first shield line is part of a first conductor layer and said second shield line is part of a second conductor layer (different materials (via crosshatch));(claim 14) with the first shield line having a first portion (reference from vertical plane with width going across x plane) and a second portion (reference from horizontal plane with width going downward);(claim 11,12) with a distance between said first and second signal line is at least twice the minimum distance allowable between features (particles of substrate) plus the minimum allowable width of a feature;

(claim 12) wherein said first shield line has a width greater than the minimum allowable width of a feature (via particle of substrate).

***Allowable Subject Matter***

Claims 8, 9, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose or make obvious the first shield line unconnected to a voltage source electrically connected to a second shield line by a via including all the limitations of the independent claim.

***Response to Arguments***

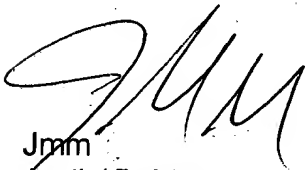
Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 9:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jmm  
April 15, 2004



**RAMAND CONEO**  
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